STARTING and SUSTAINING a CODING WORKSHOP for LIBRARIANS

LITA Forum 2015-11-14

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UNIVERSITY
LIBRARIES

Credits

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Is Coding the New Literac

www.motherjones.com/media/2014/06/computer-science-programming-code-diversity-sexism-education

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In the winter of 2011, a handful of software engineers landed in Boston just ahead of a crippling snowstorm. They were there as part of Code for America, a program that places idealistic young coders and designers in city halls across the country for a year. They'd planned to spend it building a new website for Boston's public schools, but within days of their arrival, the city all but shut down and the coders were stuck fielding calls in the city's snow

Coding bootcamp grads

qz.com/533427/coding-bootcamp-grads-boost-their-salaries-by-40-on-average-2/

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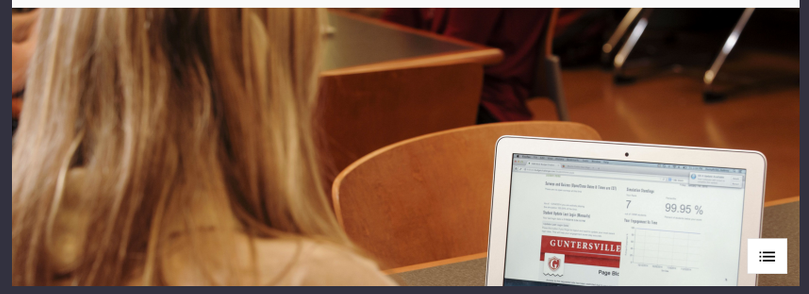
PROGRESS REPORT

Coding bootcamp grads boost their salaries by 40% on average



Why all our kids should be

www.theguardian.com/education/2012/mar/31/why-kids-should-be-taught-code

theguardian

Computer science and IT
The Observer

Why all our kids should be taught how to code

There is a growing consensus that the way children in schools are being taught information technology is in need of a radical overhaul. Here John Naughton explains the problem and offers a manifesto for revolutionary action

John Naughton

Saturday 31 March 2012
15.15 EDT

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Save for later

What's missing from teaching computing in schools is a big vision. Photograph: Alamy

Girls Who Code

girlswhocode.com

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Code for America

www.codeforamerica.org

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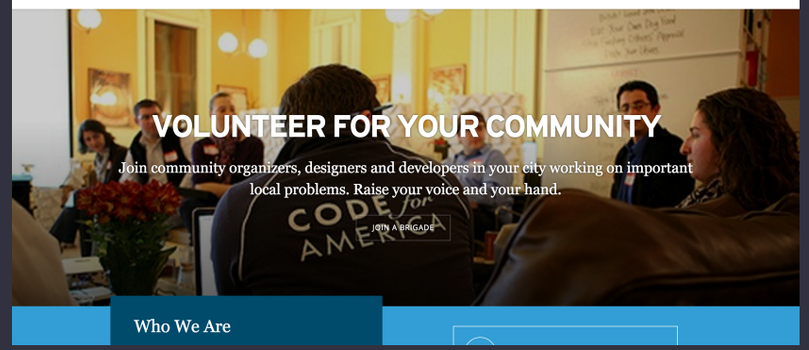
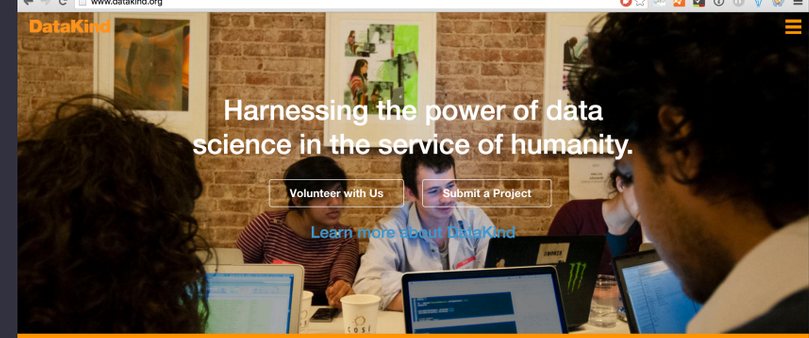


Who We Are

DataKind

www.datakind.org

DataKind



See what's happening across the DataKind network

www.datakind.org/about

Digital Literacy Initiative Ai

https://www.whitehouse.gov/blog/2011/05/13/digital-literacy-initiative-aims-help-americans-build-online-skills

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Digital Literacy Initiative Aims to Help Americans Build Online Skills

MAY 13, 2011 AT 10:35 AM ET BY ANEESH CHOPRA AND LAWRENCE STRICKLING

Summary: Today, Commerce Secretary Gary Locke launched DigitalLiteracy.gov, a new online portal to help Americans find jobs and obtain the 21st century skills being sought by today's employers.

Today, Commerce Secretary Gary Locke launched DigitalLiteracy.gov, a new online portal to help Americans find jobs and obtain the 21st century skills being sought by today's employers.

The Commerce Department's National Telecommunications and Information Administration (NTIA) developed DigitalLiteracy.gov in partnership with nine Federal agencies, with the goal of creating an online hub for librarians, educators, and other digital literacy practitioners to share content and best practices. Through DigitalLiteracy.gov, NTIA is making available to all Americans the methods for improving broadband adoption that are being developed by Recovery Act projects.

Resources and tools on the site can be used to teach and help develop digital literacy skills

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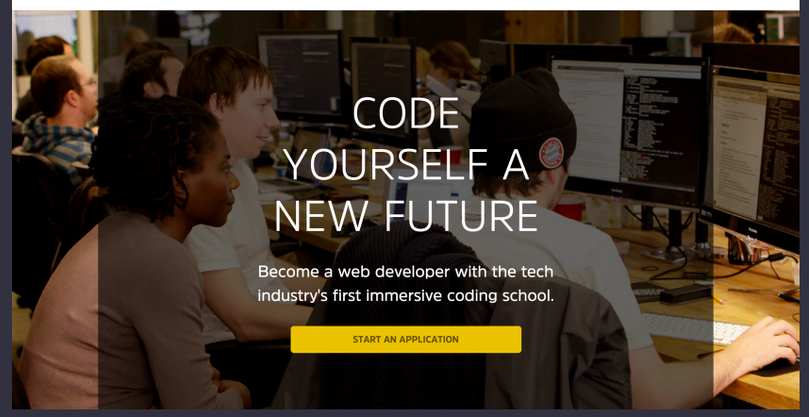

Coding - the 21st century

https://ec.europa.eu/digital-agenda/en/coding-21st-century-skill

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European Commission

DIGITAL AGENDA FOR EUROPE
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Digital society
- Skills & Jobs
- Grand Coalition
- Education
- Open Education
- Coding
- EU Code Week
- Coding testimonials
- Women in ICT
- Research and Innovation
- eHealth and Ageing
- Smart living
- Public Services
- Cybersecurity and privacy
- Online trust
- Content and media

Coding - the 21st century skill

Coding enhances creativity, teaches people to cooperate, to work together across physical and geographical boundaries and to communicate in a universal language. Technology is part of our life, and coding brings it closer to you!

SHARE THIS

Each and every interaction between humans and computers is governed by code. Whether you create a web app, follow GPS directions when driving or wish to revolutionise social interactions. Programming is everywhere and fundamental to the understanding of a hyper-connected world. Coding is the literacy of today and it helps practice 21st century skills such as problem solving, team work and analytical thinking.

Basic coding skills is also needed for many jobs. Did you know that more than 90% of professional occupations nowadays require digital competences, including programming? There is also a talent shortage as the education system is slow to react to new demands. In Europe we will have up to 825,000 ICT job vacancies by 2020.

In order to empower people of all groups in our society, and ensure the global competitiveness of Europe, we need to raise interest in programming and enhance the digital competence of Europe. Therefore we're supporting coding through various initiatives:

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Motivations

Productivity
Document process
Reduce dependence on IT
Information literacy
Career growth

Home

Edit New Page

Ben Wallberg edited this page on Jan 5 · 26 revisions

UMD Libraries Coding Workshop

The Coding Workshop meets Mondays from 3-4 pm, usually in McKeldin B0228 (DSS Conference Room).

GITTER JOIN CHAT →

Hacking the Shell

The coding workshop is a forum and a gathering space for library staff interested in coding/computer programming. It is part support group, part learning experience, and part discussion forum. You need no experience whatsoever to participate.

The group began meeting in August 2013, and has been through a number of transformations over its life. It currently functions more like an interest-group than a class. Beginning participants are encouraged to work through Codecademy lessons at their own pace outside of meetings and bring questions for discussion to the weekly meetings. Meetings also feature presentations on discrete topics related to programming, and project-oriented work sessions (either individually or in groups). The primary language of focus is Python, but other languages and technologies are often discussed

Pages 9

Links

Coding Workshop Home
CodeAcademy
Coding Workshop on Github
Meeting Schedule
Agendas
Useful Links
Project Ideas
Cloud9 Instructions
Adobe Connect Meeting

Clone this wiki locally

https://github.com/umd-codi

Clone in Desktop

History

- Focused on beginners
- 40+ initial participants
- Classroom + Codeacademy
- Slow attrition
- Resurrection as small group

Now

- 1 hour/week
- Co-working
- Short demos
- Group or 1:1 problem-solving
- Mentoring
- Discussion
- Shell programming

```
1  #!/usr/bin/env python
2
3  from trial_and_error import success
```

Success

- Still going after 27 months
- Several coding novices are using new skills to solve real library problems, esp. data wrangling/cleaning. . .

- Batch generating and transforming metadata received from digitization vendors
- Extracting mp3 metadata tags and writing them to CSV
- Generating inventories of data collections received from researchers (e.g. file count by type)
- Cleaning Hebrew text for frequent word analysis
- Converting Hebrew to civil dates and calculating chronogram values
- Converting PDF to plain text
- Generating a spread sheet of image files contained on a DVD-ROM
- Finding links and directory references in SQL files
- Re-sorting pages of PDFs
- Extracting OCLC numbers from MARC and writing to CSV
- Running a MySQL-backed web application on a server
- Getting data out of Excel and into Solr

Challenges

1. Participation attrition
2. Accommodating beginners
3. Balancing interests and goals
4. Pedagogy
5. Teaching with technology
6. Logistics

Attrition

- From 40+ to about 6 regulars
- Factors: time, logistics, difficulty, tech, supervisor, motivation, falling behind
- Big problem: time/effort required to see benefits in day-to-day work

“I couldn’t apply it to my work for the library”

Beginners

- Beginners need time, curriculum, class, tutorial, mentoring, goals, relevant outcomes
- Do best in a community of learners
- More like Columbia's Developing Librarian Project?

Interests

- Everyone has different work problems
- Toy problems alienate
- Little agreement on shared project
- Common language?

Pedagogy

- Language features (variables, conditions, loops) vs. application design
- “grammar vs. storytelling”

Technology

- Laptops and/or workstations?
- Command line (local/cloud)
- Mixed success with Codeacademy
- OS differences

Logistics

- Finding a consistent day/time/location
- Organizing can’t be one individual’s responsibility

Get started

- Solve real problems
- Support beginners
- Accept long-term commitment
- Split into interest/domain groups?
- Have more than one leader
- Reward it

Thank you.

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